

Art Unit: 2652

CLMPTO

10/024,768

12/19/2001

swh

1. A method of processing data contained in a digital input image formed by pixels, said method comprising the steps of:
 - calculating (ACT) a spatial activity value of a current pixel based on values (Y) of said current pixel and of pixels adjacent thereto,
 - determining (NND) a non-natural uniform area (NN) if the spatial activity value of various consecutive pixels is lower than a first predetermined threshold value,
 - gradient filtering (GF) values (Y) of the pixels adapted to detect (THER) strong edges (SE) inside the image,
 - determining (RC) an artifact if the spatial activity value of a current pixel is higher than a second predetermined threshold value and is concentrated on said pixel, and
 - detecting (RD) a ringing artifact if the artifact coming from the artifact determination step (RC) lies between a non-natural uniform area (NN) and a strong edge which are close together;
2. A data processing method as claimed in claim 1, characterized in that the gradient filter step (GF) utilizes a Sobel filter.
3. A data processing method as claimed in claim 1, characterized in that it further includes a step (FIL) of filtering values (Y) of the pixels comprised in a filtering area which is situated between a non-natural uniform area (NN) and a strong edge (SE) which are close together and where at least one ringing artifact has been detected.
4. A data processing method as claimed in claim 3, characterized in that the filter step (FIL) utilizes a first filter (H_1 to H_5) for as a pixel adjacent to a strong edge (SE), the coefficients of said first filter depending on the position of the adjacent pixel relative to the strong edge, and a second filter (H_6) for the other pixels of the filtering area.
5. A data processing method as claimed in claim 1, characterized in that it is associated with a method of processing blocking artifacts, the latter method utilizing the

Art Unit: 2652

gradient filter step (GF) of values (Y) of the pixels for detecting an area of natural contours (NC) inside the image.

6. A data processing method as claimed in claim 5, characterized in that the blocking artifact processing method furthermore comprises the steps of:
- detecting blocking artifacts (BAD) comprising the sub-steps of:
 - calculating (CT) a discontinuity parameter based on the values of a current pixel and adjacent pixels to said current pixel,
 - determining (AC) an artifact value of the current pixel based on discontinuity parameters of the current pixel and of neighboring pixels of the current pixel,
 - identifying (ID) blocking artifacts based on the artifact values,
 - low-pass filtering (LPF) of the values (Y) of the pixels corresponding to block artifacts determined by the detection step (BAD) with the exception of natural contour areas (NC) determined by the gradient filter step (GF).

please amend the claims as follows

7. A "computer program" product for a television receiver comprising a set of instructions which, when they are loaded in a circuit of the television receiver, causes said circuit to carry out the data processing method as claimed in claim 1.

8. A "computer program" product for a set top box comprising a set of instructions which, when they are loaded in a circuit of the set top box, causes the said circuit to carry out the data processing method as claimed in claim 1.